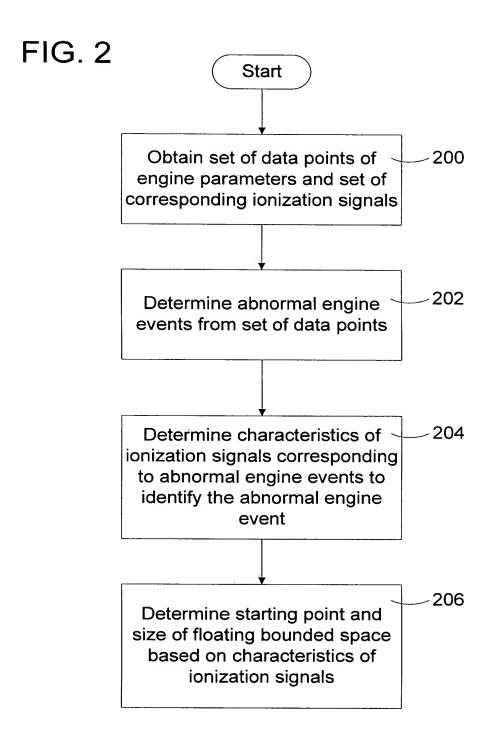


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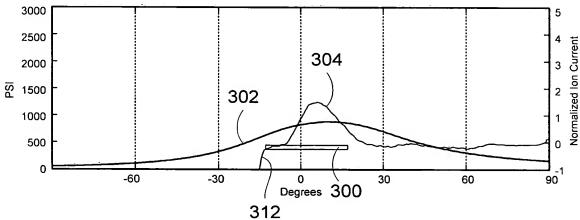
FIG. 1b 102 **Ionization Module** 130-**EGR** Ionization Ionization Module Ionization Signal Signal Signal Control Detection Analyzer Air/Fuel Module Module Module 144 142 140 104 Spark Module 106 118



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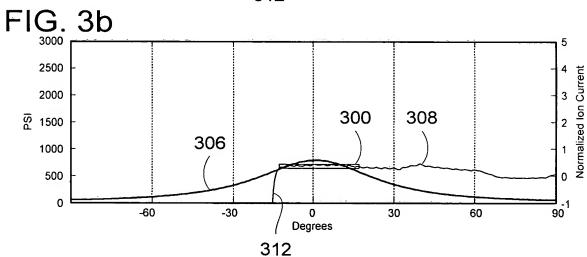


FIG. 3c

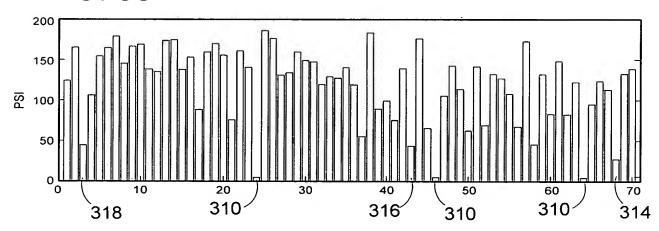


FIG. 4a

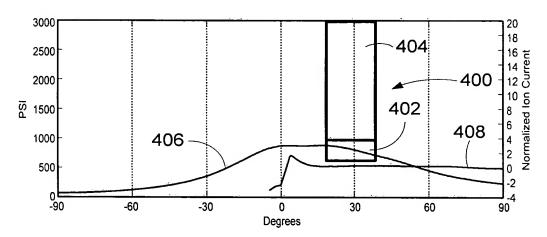
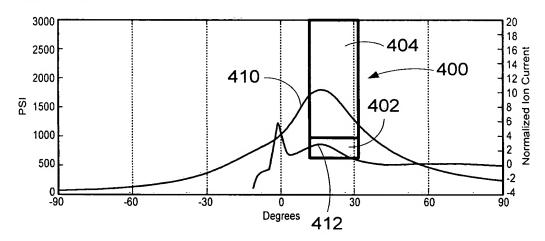
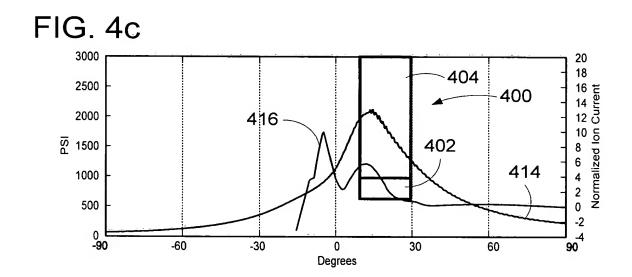


FIG. 4b





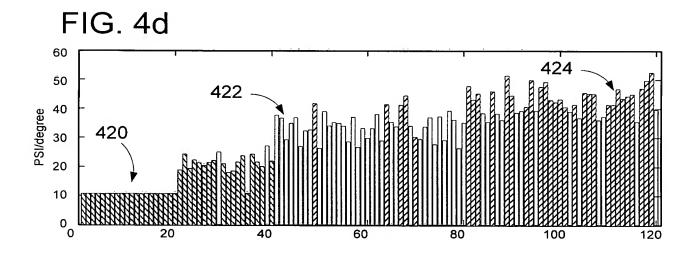


FIG. 5a

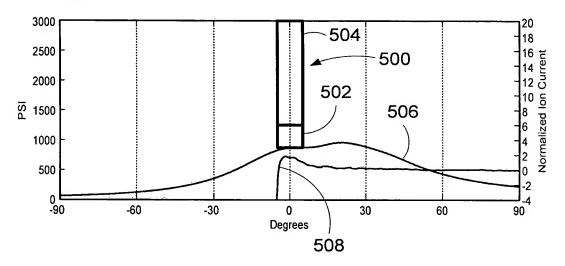
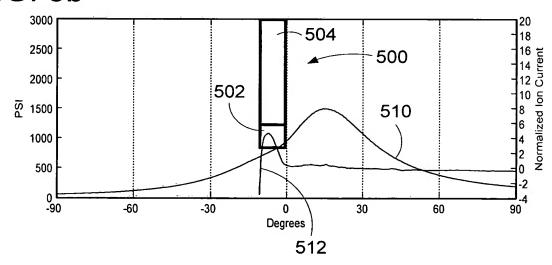
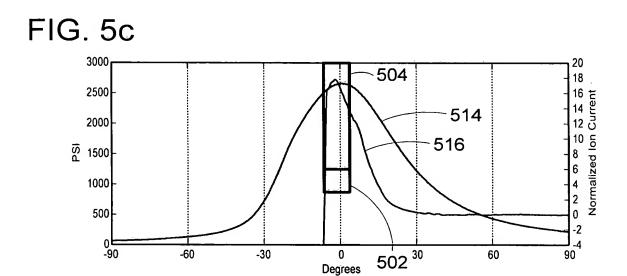
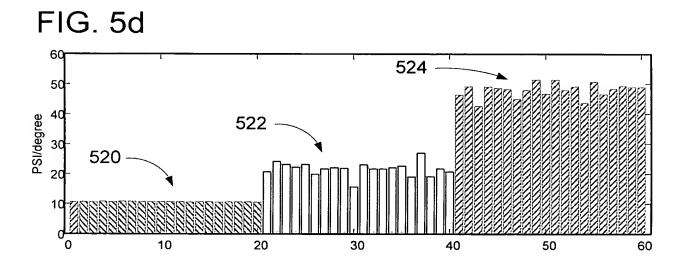


FIG. 5b







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FIG. 6 Start 600 Obtain ionization signal 602 Process ionization signal Determine start point and peak of the resultant ionization signal 604 608 606 ls portion of ionization signal Provide indication within floating bounded Yes space? No

